

AMENDMENTS TO THE CLAIMS

1. (Presently Amended) A display entity for use in presenting a visual depiction of a process entity of a process plant to a user on a display device, the display entity comprising:

a computer readable memory; and,

a display object stored on the computer readable memory and adapted to be executed on a processor, the display object including:

a property memory adapted to store a value of a property associated with the process entity;

a graphic representation of the process entity adapted to be displayed to a user on a display device when the display object is executed on a processor;

a definition routine adapted to enable a user to define a routine that operates in conjunction with the graphic representation of the process entity ~~one of the graphic objects~~ and the value of the property associated with the process entity during execution of the ~~graphic~~ display object; and

a routine that operates in conjunction with the graphic representation of the process entity to alter the manner in which the graphic representation of the process entity is displayed to the user according to the value of the property to reflect an operating condition of the process plant associated with the process entity.

2. (Original) The display entity of claim 1, wherein the routine comprises an animation routine that animates the graphic representation.

3. (Original) The display entity of claim 2, wherein the animation routine animates the graphic representation in a continuous manner.

4. (Original) The display entity of claim 2, wherein the animation routine animates the graphic representation by applying at least one of a skew, a rotation, a translation, and a resizing to the graphic representation.

5. (Original) The display entity of claim 2, wherein the animation routine animates the graphic representation by changing one of a color animation, or a color gradient animation, or an opacity animation, or a font characteristic animation, or a video property the graphic representation.

6. (Original) The display entity of claim 1, wherein the graphic representation of the process entity includes two or more primitives and wherein the routine changes a property of one of the primitives.

7. (Original) The display entity of claim 6, wherein the property of one of the primitives is a fill property.

8. (Original) The display entity of claim 1, further including a reference that connects the property value to a data source within the process plant.

9. (Original) The display entity of claim 8, wherein the routine is an executable routine that transforms the property value received from the data source within the process plant.

10. (Original) The display entity of claim 9, wherein the executable routine transforms the property value to a color or to one of an enumerated list of values or to a length, or to a font name, or to a localized string, or to a duration, or to a rotation.

11. (Original) The display entity of claim 1, wherein the routine is an executable routine that detects a condition associated with the process entity and indicates the detected condition with the change to the graphic representation of the process entity.

12. (Original) The display entity of claim 11, wherein the detected condition relates to a communication status, or a device status, or a value status.

13. (Original) The display entity of claim 1, wherein the routine is an executable routine that accepts an input from a user via the graphic visualization.

14. (Original) The display entity of claim 13, wherein the executable routine uses the input to cause a change to the property value to effect a runtime environment exterior to the display entity.

15. (Presently Amended) A computer readable medium on which a graphic display editor is stored, the graphic display editor for use in a process plant to create a graphical display that represents the operation of one or more entities within the process plant, the graphic display editor comprising:

a library of graphic objects adapted to be executed by a computer processor, each graphic object including a visual representation of a physical or a logical entity within the process plant that is displayed on a display device when the graphic object is executed by the computer processor;

a graphically based editor canvas routine that enables a user to define an executable graphic display by placing one or more visual representations of the graphic objects from the library of graphic objects onto an edit canvas to define a manner in which the one or more visual representations of the graphic objects will be displayed on a display device to a user during execution of the graphic display;

a property definition canvas routine adapted to enable a user to define a property associated with at least one of the plurality of graphic objects;

a binding definition routine adapted to enable a user to specify a binding between the property and a runtime environment within the process plant; and

a definition routine adapted to enable a user to define a routine that operates in conjunction with the visual representation of one of the graphic objects and the property during execution of the graphic display to alter the manner in which the visual representation of the one of the graphic objects is displayed when the one of the graphic objects is executed by the computer processor to reflect an operating condition of the process plant associated with the process entity.

16. (Previously Presented) The computer readable medium claim 15, wherein the definition routine enables a user to define the routine as an animation routine that animates the visual representation of the one of the graphic objects.

17. (Previously Presented) The computer readable medium of claim 16, wherein the definition routine enables a user to define the routine as an animation routine that animates the visual representation of the one of the graphic objects in a continuous manner.

18. (Previously Presented) The computer readable medium of claim 16, wherein the definition routine enables a user to define the routine as an animation routine that animates the visual representation of the one of the graphic objects by applying at least one of a skew, a rotation, a translation, and a resizing to the visual representation of the one of the graphic objects.

19. (Previously Presented) The computer readable medium of claim 16, wherein the definition routine enables a user to define the routine as an animation routine that animates the visual representation of the one of the graphic objects by changing a color associated with the visual representation of the one of the graphic objects.

20. (Previously Presented) The computer readable medium of claim 15, wherein the definition routine enables a user to define the routine as an executable transform routine that transforms a property value received for the property from the data source within the process plant.

21. (Previously Presented) The computer readable medium of claim 20, wherein the definition routine enables a user to define the executable transform routine as a transform that transforms the property value to a color, or to one of an enumerated list of values, or to a length, or to a font name, or to a localized string, or to a duration, or to a rotation.

22. (Previously Presented) The computer readable medium of claim 15, wherein the definition routine enables a user to define the routine as an executable routine that detects a condition associated with the process entity and that indicates the detected condition with the change to the visual representation of the one of the graphic objects.

23. (Previously Presented) The computer readable medium of claim 15, wherein the definition routine enables a user to define the routine as a routine that changes the visual representation of the one of the graphic objects using different animations selected based on a value of the property.

24. (Previously Presented) The computer readable medium of claim 15, wherein the definition routine enables a user to define the routine as a routine that accepts an input from a user via the graphic visualization.

25. (Previously Presented) The computer readable medium of claim 24, wherein the definition routine enables a user to define the routine as an executable routine that uses the input to cause a change to the property to effect a variable in a runtime environment exterior to the display entity.

26. (Presently Amended) A graphical display device for use in a process plant to represent one or more entities within the process plant, the graphical display device comprising:

a processor;

a plurality of graphical objects adapted to be executed by the processor;

a graphical display adapted to be executed by the processor and including the plurality of graphical objects, wherein the graphical objects are logically interconnected together within the graphic display to form a visual representation of at least a portion of the process plant displayed by the display device when the graphical display is executed by the processor;

a property memory adapted to store a value for a property associated with at least one of the plurality of graphical objects;

a binding that binds the property memory to a runtime environment within the process plant to receive data associated with the property to determine the value of the property;

a definition routine adapted to enable a user to define a routine that operates in conjunction with execution of at least one of the graphic objects during execution of the visual display; and

a routine associated with the value of the property that operates in conjunction with execution of at least one of the graphical objects when the graphical display object is executed by the processor to alter the manner in which the at least one of the graphical objects is presented within the graphical display object according to the value of the property to reflect an operating condition of the process plant associated with the process entity.

27. (Previously Presented) The graphical display device of claim 26, wherein the routine comprises an animation routine that animates the visual representation of the one of the plurality of graphic objects based on the value of the property.

28. (Previously Presented) The graphical display device of claim 27, wherein the animation routine animates the visual representation in a continuous manner.

29. (Previously Presented) The graphical display device of claim 27, wherein the animation routine animates the visual representation by applying at least one of a skew, a rotation, a translation, and a resizing to the visual representation.

30. (Previously Presented) The graphical display device of claim 27, wherein the animation routine animates the visual representation by changing a color of the visual representation.

31. (Previously Presented) The graphical display device of claim 26, wherein the visual representation of the one of the plurality of graphic objects includes two or more primitives and wherein the routine changes a property of one of the primitives.

32. (Previously Presented) The graphical display device of claim 26, wherein the routine is an executable routine that applies a transform to the property value.

33. (Previously Presented) The graphical display device of claim 32, wherein the executable routine transforms the property value to a color or to one of an enumerated list of values.

34. (Previously Presented) The graphical display device of claim 26, wherein the routine is an executable routine that detects a condition associated with a process entity based on the value of the property and indicates the detected condition with a change to the visual representation of the one of the plurality of graphic objects.

35. (Previously Presented) The graphic display device of claim 26, wherein the routine changes the visual representation of the one of the plurality of graphic objects using different animations selected based on the property value.

36. (Previously Presented) The graphic display device of claim 26, wherein the routine is an executable routine that accepts an input from a user via the visual representation of the one of the plurality of graphic objects.

37. (Previously Presented) The graphic display device of claim 36, wherein the executable routine uses the input to cause a change to a runtime environment exterior to the display entity.